

Appl. No. 10/049,569
Amdt. dated November 29, 2004
Reply to Office Action of, May 27, 2004

REMARKS

Support for Claim 12 can be found in the specification, e.g., Page 9, lines 31-37.

3) Applicants will amend the specification in due course when allowable subject matter is indicated.

4)-5). The objection to Claims 6 and 7 was not understood these claims are directed to different classes of subject matter, and therefore do not appear to be duplicative of other claims. These claims were amended for reasons of clarity, however, and such amendment do not change the scope of the claim.

Claim 8 was amended in the Preliminary amendment filed February 15, 2002 to eliminate the multiple dependency. Therefore, it should not have been withdrawn from consideration. It is currently amended to clarify it. These amendments do not change its scope in any way.

6)-8). The polynucleotides and polypeptides of the present invention can be used as reagents for the detection of gene expression. Such expression has been identified in various organs and tissues, including human brain, kidney, blood, lung, colon, lymph nodes, liver and placenta. See, e.g., Specification, Page 15, lines 29-30. Detection can be performed directly on these tissues, as well as on other specimens, including, urine, biopsy tissue, or autopsy material. See, e.g., Specification, Page 12, lines 23-31. Antibodies to the claimed proteins can be used for a variety of purposes, including for detecting expression in normal and disease states, and as a general marker, e.g., in toxicology experiments to determine whether expression is perturbed by a potentially toxic agent.

Most recent published work by Kilk et al. (Neuropeptides. 2004 Oct; 38(5):316-24), indicates that human galanin receptor type 1 (GalR1) mRNA has been used to optimize antisense

Appl. No. 10/049,569
Amdt. dated November 29, 2004
Reply to Office Action of, May 27, 2004

efficacy and Kofler et al. demonstrate the expression of neuropeptide galanin and galanin receptors in human skin (J Invest Dermatol. 2004 April; 122(4): 1050-3). Page 8, lines 12-15 of the present specification indicates that PGPCR-3 protein is homologous to human galanin receptor.

PGPCR-3 was subsequently re-named GPR-78, and has a separate entry in the On-line Mendelian inheritance in Man (OMIM). Thus, the scientific community generally recognizes it as a useful gene. See Exhibit A. (The attached BLAST search shows 100% identity to SEQ ID NO:2 and GPR-78).

Thus, the Examiner's objections with respect to a lack of utility are not justified.

9). The claims have amended to address the alleged indefiniteness. These amendments do not change the scope of the claims in any way, but merely clarify them.

In view of the above remarks, favorable reconsideration is courteously requested. If there are any remaining issues which could be expedited by a telephone conference, the Examiner is courteously invited to telephone counsel at the number indicated below.

Appl. No. 10/049,569
Amdt. dated November 29, 2004
Reply to Office Action of, May 27, 2004

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,




Richard M. Lebovitz, Reg. No. 37,067
Attorney for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

Attorney Docket No.: MERCK-2378

Date: November 29, 2004

OMIM
Online Mendelian Inheritance in Man


*Johns
Hopkins
University*

PubMedNucleotideProteinGenomeStructurePMCTaxonomyOMIM

Search

OMIM

▼

for

Go

Clear

LimitsPreview/IndexHistoryClipboardDetails

Display

Detailed ▼

Show: 20 ▼

Send to

Text ▼

606921**[Links](#)**G PROTEIN-COUPLED RECEPTOR 78; GPR78**Gene map locus [Chr.4](#)**TEXT*DESCRIPTION**

G protein-coupled receptors (GPCRs, or GPRs) contain 7 transmembrane domains and transduce extracellular signals through heterotrimeric G proteins.

CLONING

[Lee et al. \(2001\)](#) identified GPR78 in a genomic database using the sequence of GPR26 ([604847](#)) as query. PCR primers were designed to amplify GPR78 from a genomic library, and overlapping fragments of partial sequences were joined to obtain the full-length cDNA. GPR78 encodes a deduced 363-amino acid protein that shares 56% sequence identity with GPR26 in the transmembrane region. Northern blot analysis revealed a 1.1-kb transcript in pituitary, and 1.1- and 4.2-kb transcripts in placenta. No expression was detected in brain, skeletal muscle, lung, heart, liver, pancreas, or kidney.

**GENE FUNCTION**

[Van Laar et al. \(2000\)](#) determined that GPR78 expression increased in fibroblasts or HeLa cells following UV-A irradiation, exposure to DNA-alkylating agents, or endoplasmic reticulum (ER) stress caused by osmotic shock or the glycosylation inhibitor tunicamycin. The response depended upon the cell line studied. UV-B was a weaker inducer, and UV-C and several other DNA-damaging agents did not induce GPR78 expression. Induction of GPR78 by tunicamycin required activation of multiple ER stress-response elements in the promoter of the GPR78 gene, and induction by a DNA-alkylating agent was independent of the unfolded protein response.

**MAPPING**

[Lee et al. \(2001\)](#) mapped the GPR78 gene to chromosome 4 based on sequence similarity between the GPR78 sequence and a genomic clone (GenBank [AC007104](#)) localized to chromosome 4.

REFERENCES

1. Lee, D. K.; Nguyen, T.; Lynch, K. R.; Cheng, R.; Vanti, W. B.; Arkhitko, O.; Lewis, T.; Evans, J. F.; George, S. R.; O'Dowd, B. F. :

Discovery and mapping of ten novel G protein-coupled receptor genes. *Gene* 275: 83-91, 2001.

PubMed ID : [11574155](#)

2. van Laar, T.; Schouten, T.; Hoogervorst, E.; van Eck, M.; van der Eb, A. J.; Terleth, C. :

The novel MMS-inducible gene Mif1/KIAA0025 is a target of the unfolded protein response pathway. *FEBS Lett.* 469: 123-131, 2000.

PubMed ID : [10708769](#)

CONTRIBUTORS

Patricia A. Hartz - updated : 9/2/2003

CREATION DATE




Patricia A. Hartz : 5/9/2002

EDIT HISTORY

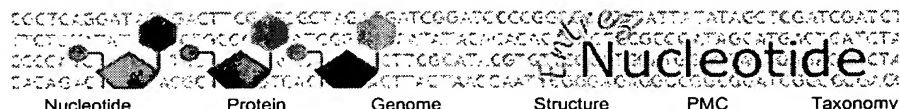
mgross : 9/2/2003

carol : 5/9/2002

Copyright © 1966-2004 Johns Hopkins University

[Display](#) [Detailed](#)  Show: [20](#)  [Send to](#) [Text](#) 

[Disclaimer](#) | [Write to the Help Desk](#) | [Privacy Policy](#)
[NCBI](#) | [NLM](#) | [NIH](#)



Entrez

PubMed

Nucleotide

Protein

Genome

Structure

PMC

Taxonomy

Books

Search

Nucleotide



for

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

Display

default



Show:

20



Send to

File



Get Subsequence

Features

1: NM_080819. Reports Homo sapiens G pr...[gi:36951033]

Links

LOCUS NM_080819 1955 bp mRNA linear PRI 23-AUG-2004
 DEFINITION Homo sapiens G protein-coupled receptor 78 (GPR78), mRNA.
 ACCESSION NM_080819
 VERSION NM_080819.2 GI:36951033
 KEYWORDS .
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (bases 1 to 1955)
 AUTHORS Clark,H.F., Gurney,A.L., Abaya,E., Baker,K., Baldwin,D., Brush,J.,
 Chen,J., Chow,B., Chui,C., Crowley,C., Currell,B., Deuel,B.,
 Dowd,P., Eaton,D., Foster,J., Grimaldi,C., Gu,Q., Hass,P.E.,
 Heldens,S., Huang,A., Kim,H.S., Klimowski,L., Jin,Y., Johnson,S.,
 Lee,J., Lewis,L., Liao,D., Mark,M., Robbie,E., Sanchez,C.,
 Schoenfeld,J., Seshagiri,S., Simmons,L., Singh,J., Smith,V.,
 Stinson,J., Vagts,A., Vandlen,R., Watanabe,C., Wieand,D., Woods,K.,
 Xie,M.H., Yansura,D., Yi,S., Yu,G., Yuan,J., Zhang,M., Zhang,Z.,
 Goddard,A., Wood,W.I., Godowski,P. and Gray,A.
 TITLE The secreted protein discovery initiative (SPDI), a large-scale
 effort to identify novel human secreted and transmembrane proteins:
 a bioinformatics assessment
 JOURNAL Genome Res. 13 (10), 2265-2270 (2003)
 PUBMED 12975309
 REFERENCE 2 (bases 1 to 1955)
 AUTHORS Lee,D.K., Nguyen,T., Lynch,K.R., Cheng,R., Vanti,W.B., Arkhitko,O.,
 Lewis,T., Evans,J.F., George,S.R. and O'Dowd,B.F.
 TITLE Discovery and mapping of ten novel G protein-coupled receptor genes
 JOURNAL Gene 275 (1), 83-91 (2001)
 PUBMED 11574155
 COMMENT VALIDATED REFSEQ: This record has undergone preliminary review of
 the sequence, but has not yet been subject to final review. The
 reference sequence was derived from AK128807.1 and BC057778.1.
 On Sep 29, 2003 this sequence version replaced gi:18201873.

Summary: G protein-coupled receptors (GPCRs, or GPRs) contain 7
 transmembrane domains and transduce extracellular signals through
 heterotrimeric G proteins.[supplied by OMIM].

FEATURES
 source Location/Qualifiers
 1..1955
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /chromosome="4"
 /map="4p16.1"
 gene 1..1955
 /gene="GPR78"
 /db_xref="GeneID:27201"
 /db_xref="LocusID:27201"
 /db_xref="MIM:606921"
 CDS 420..1511
 /gene="GPR78"
 /note="go_component: integral to membrane [goid 0016021]
 [evidence IEA];
 go_function: rhodopsin-like receptor activity [goid
 0001584] [evidence IEA];
 go_process: G-protein coupled receptor protein signaling
 pathway [goid 0007186] [evidence IEA]"
 /codon_start=1

/product="G protein-coupled receptor 78"
/protein_id="NP_543009.2"
/db_xref="GI:36951034"
/db_xref="GeneID:27201"
/db_xref="LocusID:27201"
/db_xref="MIM:606921"
/translation="MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVL
LVNLSLGHLLLAALDMPFTLLGVMRGRTPSAPGACQVIGFLDTFLASNAALSVAALSA
DQWLAVGFPLRYAGRLRPYAGLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRL
PPEPERPRFAAFTATLHAVGFVLPLAVLCLTSLQVHRVARRHCQRMdVTMKALALLA
DLHPSVRQRCLIQKRRRRHRATRKIGIAIATFLICFAPYVMTRLaelVPFVTVNAQWG
ILSKCLTYSKAVADPFTYSLLRRPFQVLAGMVHRLKRTPRPASTHDSSLDVAGMVH
QLLKRTPRPASTHNGSVDTENDSCLQQTH"

ORIGIN	1	acagaagcgc	gcagagtccc	atcctgccac	gccacgagga	gagaagaagg	aaagatacac
	61	tgttaggaaa	gagacctccc	tgcgccctac	gccccgcgcc	cctgcgcctc	gcttcagcct
	121	caggacagtc	ctgccgggac	ggtgagcgca	ttcagcaccc	tggaacagcac	cgcgggttgcg
	181	ctgcctccag	ggcggccccc	ggctgctcct	gctccgcaga	gctacgccct	ccccccgggt
	241	gccccggacc	ctgcacttgc	cgccgctttc	ctcgcgctgc	tctggacctt	gctagccggc
	301	tctgcacctc	ccagaagccg	tgggcgcgcc	gctcagctgc	tccatcgccct	cactttccca
	361	ggctcgcgcc	cgaagcagag	ccatgagaac	cccaggggtgc	ctggcgagcc	gctagcgcca
	421	tgggccccgg	cgaggcgctg	ctggcgggtc	tcctgggtgat	ggtactggcc	gtggcgctgc
	481	tatccaacgc	actggtgctg	ctttgtttgc	cctacagcgc	tgagctccgc	actcgagcct
	541	caggcgctcct	cctggtgaat	ctgtctctgg	gccacctgct	gctggcggcg	ctggacatgc
	601	ccttcacgct	gctcgtgtgt	atgcgcgggc	ggacaccgtc	ggcgccccgc	gcatgccaaag
	661	tcattggcct	cctggacacc	ttcctggcgt	ccaacgcggc	gctgagcgtg	gcggcgctga
	721	gcgcagacca	gtggctggca	gtgggcttcc	cactgcgcta	cgccggacgc	ctgcgaccgc
	781	gctatgccgg	cctgctgctg	ggctgtgcct	ggggacagtc	gctggccttc	tcaggcgctg
	841	cacttggtctg	ctcgtggctt	ggctacagca	gcgccttcgc	gtcctgttcg	ctgcgcctgc
	901	cgcccagacc	tgagcgtccg	cgcttcgcag	ccttcaccgc	cacgctccat	gccgtgggct
	961	tcgtgctgcc	gctggcgggtg	ctctgctcca	cctcgctcca	ggtgcaccgg	gtggcacgca
	1021	gacactgcca	gcgcattggac	accgtcacca	tgaaggcgct	cgcgctgctc	gccgacctgc
	1081	acccacagtgt	gcggcagcgc	tgcctcatcc	agcagaagcg	gcgccgccac	cgcgccacca
	1141	ggaagatttg	cattgctatt	gcgaccttcc	tcattctgctt	tgccccgtat	gtcatgacca
	1201	ggctggcgga	gctcgtgccc	ttcgtcaccg	tgaacgcccc	gtggggcatc	ctcagcaagt
	1261	gcctgacctg	cagcaaggcg	gtggccgacc	cgttcacgta	ctctctgctc	cgccggccgt
	1321	tcgcgcaagt	cctggccggc	atggtgcacc	ggctgctgaa	gagaaccccc	cgcccagcat
	1381	ccacccatga	cagctctctg	gatgtggccg	gcatggtgca	ccagctgctg	aagagaaccc
	1441	cgcgcccagc	gtccacccac	aacggctctg	tggacacaga	gaatgattcc	tgcttgacgc
	1501	agacacactg	agggcctggc	agggctcatc	gccccacct	tctaagaagc	cctgtggaaa
	1561	gggcaactggc	cctgccacag	agatgccact	ggggaccccc	agacaccagt	ggcttgactt
	1621	tgagctaagg	ctgaagtaca	ggaggaggag	gaggagaggg	ccggatgtgg	gtgtggacag
	1681	cagtagtggc	ggaggagagc	tgggggctgg	gctgcctggc	tgctgggtgg	ccccgggaca
	1741	gtggcttttc	ctctctgaac	cttagcttcc	tcacccttgt	tctgggggtca	tggcgatgct
	1801	tcgagacagt	gggtagggaa	gtgccctgtg	tggcatatgg	tactcgtagg	cgtgctataa
	1861	gtgactgctg	ttcatgtggg	tgaggtggtc	actcttgctc	agggctctgtt	gtgcagccca
	1921	gatggacacc	tgtttctcca	aaaaaaaaaa	aaaaa		

//

Disclaimer | Write to the Help Desk
NCBI | NLM | NIH

Nov 23 2004 06:38:17



Entrez

PubMed

Nucleotide

Protein

Genome

Structure

PMC

Taxonomy

Books

Search

Protein

for

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

Display

GenPept

Show:

20

Send to

File

Get Subsequence

Features

☐ 1: [NP_543009](#). Reports G protein-coupled...[gi:36951034]

 BLink, Domains,
Links

LOCUS NP_543009 363 aa linear PRI 23-AUG-2004
 DEFINITION G protein-coupled receptor 78 [Homo sapiens].
 ACCESSION NP_543009
 VERSION NP_543009.2 GI:36951034
 DBSOURCE REFSEQ: accession [NM_080819.2](#)
 KEYWORDS .
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (residues 1 to 363)
 AUTHORS Clark,H.F., Gurney,A.L., Abaya,E., Baker,K., Baldwin,D., Brush,J.,
 Chen,J., Chow,B., Chui,C., Crowley,C., Currell,B., Deuel,B.,
 Dowd,P., Eaton,D., Foster,J., Grimaldi,C., Gu,Q., Hass,P.E.,
 Heldens,S., Huang,A., Kim,H.S., Klimowski,L., Jin,Y., Johnson,S.,
 Lee,J., Lewis,L., Liao,D., Mark,M., Robbie,E., Sanchez,C.,
 Schoenfeld,J., Seshagiri,S., Simmons,L., Singh,J., Smith,V.,
 Stinson,J., Vagts,A., Vandlen,R., Watanabe,C., Wieand,D., Woods,K.,
 Xie,M.H., Yansura,D., Yi,S., Yu,G., Yuan,J., Zhang,M., Zhang,Z.,
 Goddard,A., Wood,W.I., Godowski,P. and Gray,A.
 TITLE The secreted protein discovery initiative (SPDI), a large-scale
 effort to identify novel human secreted and transmembrane proteins:
 a bioinformatics assessment
 JOURNAL Genome Res. 13 (10), 2265-2270 (2003)
 PUBMED 12975309
 REFERENCE 2 (residues 1 to 363)
 AUTHORS Lee,D.K., Nguyen,T., Lynch,K.R., Cheng,R., Vanti,W.B., Arkhitko,O.,
 Lewis,T., Evans,J.F., George,S.R. and O'Dowd,B.F.
 TITLE Discovery and mapping of ten novel G protein-coupled receptor genes
 JOURNAL Gene 275 (1), 83-91 (2001)
 PUBMED 11574155
 COMMENT VALIDATED REFSEQ: This record has undergone preliminary review of
 the sequence, but has not yet been subject to final review. The
 reference sequence was derived from [AK128807.1](#) and [BC057778.1](#).
 On Sep 29, 2003 this sequence version replaced gi:[18201874](#).

Summary: G protein-coupled receptors (GPCRs, or GPRs) contain 7 transmembrane domains and transduce extracellular signals through heterotrimeric G proteins.[supplied by OMIM].

FEATURES Location/Qualifiers
 source 1..363
 /organism="Homo sapiens"
 /db_xref="taxon:9606"
 /chromosome="4"
 /map="4p16.1"
 Protein 1..363
 /product="G protein-coupled receptor 78"
 Region 60..294
 /region_name="7 transmembrane receptor (rhodopsin family)"
 /note="7tm 1"
 /db_xref="CDD:5814"
 CDS 1..363
 /gene="GPR78"
 /coded_by="NM_080819.2:420..1511"
 /note="go_component: integral to membrane [goid [0016021](#)]
 [evidence IEA];
 go_function: rhodopsin-like receptor activity [goid

0001584] [evidence IEA];
go_process: G-protein coupled receptor protein signaling
pathway [goid 0007186] [evidence IEA]"
/db_xref="GeneID:27201"
/db_xref="LocusID:27201"
/db_xref="MIM:606921"

ORIGIN

```
1  mgpgeallag  llvmvlaval  lsna1vl1cc  aysaelrtra  sgvl1vn1sl  gh111aaldm
61 pftllgvmerg rtpsapgacq  vigfldtfla  snaalsvaal  sadqwlavgf  plryagrlrp
121 ryaglllgca  wgqslafsga  algcswlgys  safascslrl  ppeperprfa  aftatlhavg
181 fvlplavlc1  tslqvhrvar  rhcqrmdtvt  mkalallad1  hpsvrqrcli  qqkrrrhrat
241 rkigiaiatf  licfapyvmt  rlaelpfvf  vnaqwgilsk  cltyskavad  pftysllrrp
301 frqvlagmvh  rllkrtprpa  sthdssldva  gmvhqllkrt  prpasthngs  vdtendsclq
361 qth
```

//

[Disclaimer](#) | [Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)

Nov 23 2004 06:38:17



results of BLAST

BLASTP 2.2.10 [Oct-19-2004]

Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1101749500-20677-178263183679.BLASTQ4

Query=

(363 letters)

Database: All non-redundant GenBank CDS

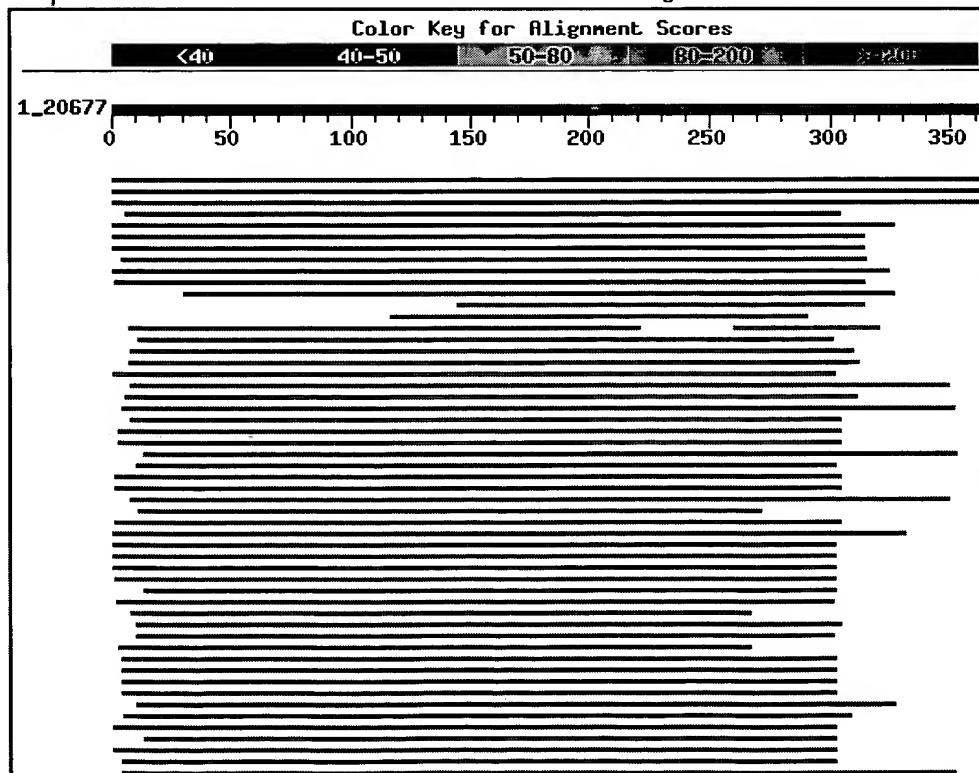
translations+PDB+SwissProt+PIR+PRF excluding environmental samples
2,183,111 sequences; 740,385,392 total letters

If you have any problems or questions with the results of this search please refer to the [BLAST FAQs](#)

[Taxonomy reports](#)

Distribution of 514 Blast Hits on the Query Sequence

Mouse-over to show define and scores. Click to show alignments


























Sequences producing significant alignments:				Score (bits)	E Value	
gi 37183331 gb AAQ89465.1	GPR78 [Homo sapiens]	>gi 3695103...		720	0.0	
gi 16566319 gb AAL26479.1	G protein-coupled receptor [Homo...			714	0.0	
gi 55622242 ref XP_526521.1	PREDICTED: similar to G protei...			435	e-120	
gi 50747354 ref XP_426354.1	PREDICTED: similar to G protei...			347	3e-94	
gi 23592220 ref NP_703143.1	G protein-coupled receptor 26 ...			330	5e-89	
gi 20301978 ref NP_620196.1	G protein-coupled receptor 26 ...			321	2e-86	
gi 27734158 ref NP_775586.1	G protein-coupled receptor 26 ...			320	3e-86	
gi 50749947 ref XP_421809.1	PREDICTED: similar to G protei...			315	9e-85	
gi 47222325 emb CAG05074.1	unnamed protein product [Tetrao...			301	2e-80	
gi 47220248 emb CAG03282.1	unnamed protein product [Tetrao...			295	1e-78	
gi 55634715 ref XP_521629.1	PREDICTED: similar to G protei...			241	2e-62	
gi 26335307 dbj BAC31354.1	unnamed protein product [Mus mu...			197	3e-49	
gi 29611572 gb AAO85097.1	G protein-coupled receptor GPR26...			189	1e-46	
gi 47214058 emb CAG00716.1	unnamed protein product [Tetrao...			188	2e-46	
gi 47215666 emb CAG04750.1	unnamed protein product [Tetrao...			95	2e-18	
gi 2143560 pir I57942	5-hydroxytryptamine receptor - rat >...			90	8e-17	
gi 50738634 ref XP_426102.1	PREDICTED: similar to Somatost...			89	2e-16	
gi 47220082 emb CAG12230.1	unnamed protein product [Tetrao...			89	2e-16	
gi 1162962 gb AAA92633.1	5-HT6 serotonin receptor			89	2e-16	
gi 20302609 gb AAM18805.1	type five-like somatostatin rece...			88	4e-16	
gi 37499136 gb AAQ91625.1	dopamine D1/beta receptor [Branc...			87	5e-16	
gi 13242259 ref NP_077341.1	5-hydroxytryptamine (serotonin...			87	7e-16	
gi 38016883 gb AAR07900.1	5-hydroxytryptamine/serotonin re...			87	9e-16	
gi 55586381 ref XP_524584.1	PREDICTED: 5-hydroxytryptamine...			87	9e-16	
gi 9794865 gb AAF98367.1	somatostatin receptor type two [C...			87	9e-16	
gi 37729012 gb AAO03561.1	somatostatin receptor subtype 5 ...			86	1e-15	
gi 46575715 gb AAH69063.1	Somatostatin receptor 4 [Homo sa...			86	2e-15	
gi 55651326 ref XP_525282.1	PREDICTED: similar to dJ753D10...			86	2e-15	
gi 10946684 ref NP_067333.1	5-hydroxytryptamine (serotonin...			86	2e-15	
gi 2340855 emb CAA74971.1	D1A4 Dopamine receptor [Cyprinus...			86	2e-15	
gi 4557863 ref NP_001043.1	somatostatin receptor 4 [Homo s...			85	3e-15	
gi 3941549 gb AAC82382.1	putative odorant receptor LOR4 [L...			85	3e-15	
gi 5689779 emb CAB51953.1	dJ753D10.1 (somatostatin recepto...			84	6e-15	
gi 20899638 ref XP_139909.1	somatostatin receptor 5 [Mus m...			84	6e-15	
gi 8101115 gb AAF72547.1	somatostatin subtype 5 receptor [...			84	6e-15	
gi 16945894 gb AAL32173.1	somatostatin receptor 2 [Takifug...			84	6e-15	
gi 2623672 gb AAB86492.1	somatostatin receptor type 5 [Mus...			84	6e-15	
gi 1359759 emb CAA66832.1	histamine H2 receptor [Homo sapi...			84	8e-15	
gi 50755091 ref XP_425208.1	PREDICTED: similar to histamin...			84	8e-15	
gi 2340857 emb CAA74973.1	D1B Dopamine receptor [Cyprinus ...			84	8e-15	
gi 21684966 emb CAD29615.1	somatostatin receptor subtype 5...			84	8e-15	
gi 1085593 pir JC4120	histamine H2 receptor - guinea pig >...			83	1e-14	
gi 2119498 pir I51660	dopamine D1B receptor - African claw...			83	1e-14	
gi 6680325 ref NP_032339.1	5 hydroxytryptamine receptor 4 ...			83	1e-14	
gi 3646355 emb CAA09598.1	serotonin 4 receptor [Mus musculus]			83	1e-14	
gi 3647303 emb CAA70776.1	serotonin 4 receptor [Mus musculus]			83	1e-14	
gi 3647301 emb CAA70775.1	serotonin 4 receptor [Mus musculus]			83	1e-14	
gi 47219388 emb CAG01551.1	unnamed protein product [Tetrao...			82	2e-14	
gi 46451435 gb AAS97962.1	type 2 somatostatin receptor [As...			82	2e-14	
gi 2062423 gb AAC53353.1	somatostatin receptor type 5 [Mus...			82	2e-14	
gi 6981588 ref NP_037014.1	somatostatin receptor 5 [Rattus...			82	3e-14	
gi 3183689 emb CAA73912.1	serotonin receptor 4 [Cavia porc...			82	3e-14	
gi 1204090 emb CAA56455.1	dopamine receptor [Takifugu rubr...			81	4e-14	
gi 6978781 ref NP_036900.1	dopamine receptor 5 [Rattus nor...			81	4e-14	

gi 2209143 gb AAB61418.1	somatostatin receptor type 5 [Mus...	81	4e-14	
gi 3646424 emb CAA09599.1	serotonin 4 receptor [Rattus nor...	81	4e-14	
gi 6446420 gb AAF08613.1	somatostatin receptor type 1 subt...	81	4e-14	
gi 12274900 emb CAC22248.1	5-hydroxytryptamine4 receptor [...]	81	5e-14	
gi 29789042 ref NP_038531.1	dopamine receptor 5 [Mus muscu...	81	5e-14	
gi 11321563 ref NP_000861.1	5-hydroxytryptamine (serotonin...	81	5e-14	
gi 41282074 ref NP_955525.1	5-hydroxytryptamine (serotonin...	81	5e-14	
gi 3326989 emb CAA73108.1	5-HT4 receptor [Homo sapiens]	81	5e-14	
gi 3326991 emb CAA73109.1	5-HT4 receptor [Homo sapiens]	81	5e-14	
gi 12274906 emb CAC22251.1	5-hydroxytryptamine4 receptor [...]	81	5e-14	
gi 40643226 emb CAC79538.1	serotonin receptor 5-HT4 [Homo ...]	81	5e-14	
gi 1518034 gb AAC60067.1	dopamine D1A1 receptor	81	5e-14	
gi 3962388 emb CAA06536.1	dopamine D1/beta receptor [Branc...	81	5e-14	
gi 26005719 emb CAD58392.1	5-hydroxytryptamine 4 receptor ...	81	5e-14	
gi 50757971 ref XP_425384.1	PREDICTED: similar to Somatost...	80	6e-14	
gi 6900062 emb CAB71316.1	5-HT4 receptor [Homo sapiens]	80	6e-14	
gi 47222737 emb CAG01704.1	unnamed protein product [Tetrao...	80	6e-14	
gi 6981584 ref NP_036851.1	somatostatin receptor 1 [Rattus...	80	8e-14	
gi 55640843 ref XP_522831.1	PREDICTED: somatostatin recept...	80	8e-14	
gi 54696710 gb AAV38727.1	somatostatin receptor 1 [synthet...	80	8e-14	
gi 6678037 ref NP_033242.1	somatostatin receptor 1 [Mus mu...	80	8e-14	
gi 6446422 gb AAF08614.1	somatostatin receptor type 1 subt...	80	8e-14	
gi 4503391 ref NP_000789.1	dopamine receptor D5 [Homo sapi...	80	1e-13	
gi 2340853 emb CAA74970.1	D1A3 Dopamine receptor [Cyprinus...	80	1e-13	
gi 89048 pir A39008	histamine H2 receptor - dog >gi 163952...	79	1e-13	
gi 29570499 gb AAO91738.1	Dopamine receptor protein 1, iso...	79	1e-13	
gi 29570498 gb AAO91737.1	Dopamine receptor protein 1, iso...	79	1e-13	
gi 22658483 gb AAN01276.1	dopamine receptor D5 [Homo sapiens]	79	1e-13	
gi 3941551 gb AAC82383.1	putative odorant receptor LOR14 [...]	79	1e-13	
gi 47228936 emb CAG09451.1	unnamed protein product [Tetrao...	79	1e-13	
gi 14336736 gb AAK61266.1	somatostatin receptor type 5 [Ho...	79	2e-13	
gi 4557865 ref NP_001044.1	somatostatin receptor 5 [Homo s...	79	2e-13	
gi 2119491 pir I51659	dopamine D1A receptor - African claw...	79	2e-13	
gi 2136182 pir I57955	somatostatin receptor - human >gi 43...	79	2e-13	
gi 55643121 ref XP_510725.1	PREDICTED: somatostatin recept...	79	2e-13	
gi 49115095 gb AAH72912.1	MGC80373 protein [Xenopus laevis]	79	2e-13	
gi 47219262 emb CAG11724.1	unnamed protein product [Tetrao...	79	2e-13	
gi 49169818 ref NP_033245.2	somatostatin receptor 4 [Mus m...	79	2e-13	
gi 6754260 ref NP_034613.1	5-hydroxytryptamine (serotonin)...	79	2e-13	
gi 6981586 ref NP_037168.1	somatostatin receptor 4 [Rattus...	79	2e-13	
gi 31204165 ref XP_311031.1	ENSANGP00000020010 [Anopheles ...]	79	2e-13	
gi 31560584 ref NP_034384.2	galanin receptor 2 [Mus muscul...	79	2e-13	
gi 21654945 gb AAL23575.1	putative G-protein coupled recep...	79	2e-13	
gi 11225272 ref NP_062221.1	somatostatin receptor 2 [Rattu...	78	3e-13	
gi 25990354 gb AAN76495.1	type five somatostatin receptor ...	78	3e-13	
gi 21314570 gb AAM47010.1	histamine receptor H2 [Mus muscu...	78	3e-13	
gi 12860788 dbj BAB32044.1	unnamed protein product [Mus mu...	78	3e-13	
gi 55645903 ref XP_511653.1	PREDICTED: somatostatin recept...	78	4e-13	
gi 9506709 ref NP_062045.1	galanin receptor 2 [Rattus norv...	78	4e-13	
gi 27806653 ref NP_776467.1	dopamine receptor D1 [Bos taur...	78	4e-13	
gi 50344544 emb CAD59057.1	5-hydroxytryptamine receptor 5A...	78	4e-13	
gi 11878036 gb AAG40780.1	somatostatin receptor 1 [Sus scr...	78	4e-13	
gi 4503905 ref NP_003848.1	galanin receptor 2 [Homo sapien...	77	5e-13	
gi 54696714 gb AAV38729.1	somatostatin receptor 2 [Homo sa...	77	5e-13	
gi 456851 gb AAB29143.1	D1A dopamine receptor; D1A recepto...	77	5e-13	
gi 543108 pir JC2083	somatostatin receptor 2 - pig >gi 464...	77	5e-13	
gi 13435405 ref NP_071640.1	histamine receptor H2 [Homo sa...	77	5e-13	
gi 32493367 gb AAH54510.1	HRH2 protein [Homo sapiens]	77	5e-13	
gi 55625426 ref XP_527128.1	PREDICTED: similar to HRH2 pro...	77	5e-13	
gi 3642918 gb AAC36589.1	galanin receptor type 2 [Mus musc...	77	5e-13	



































gi 47086925 ref NP_998462.1	zgc:85682 [Danio rerio] >gi 46...	77	5e-13	
gi 6680275 ref NP_032312.1	histamine receptor H 2 [Mus mus...	77	5e-13	
gi 50732639 ref XP_425970.1	PREDICTED: similar to 5-hydrox...	77	5e-13	
gi 3941547 gb AAC82381.1	putative odorant receptor LOR3 [L...	77	5e-13	
gi 7229404 gb AAF42810.1	somatostatin receptor 2B [Homo sa...	77	5e-13	
gi 14550544 gb AAH09522.1	Unknown (protein for IMAGE:33547...	77	5e-13	
gi 49902351 gb AAH74796.1	Orexin receptor 1 [Homo sapiens]...	77	7e-13	
gi 1518038 gb AAC60069.1	dopamine D1A2 receptor	77	7e-13	
gi 39597901 emb CAE68593.1	Hypothetical protein CBG14463 [...]	77	7e-13	
gi 2119500 pir I50475	dopamine D1 receptor - goldfish >gi ...	77	7e-13	
gi 178896 gb AAA35550.1	beta-3-adrenergic receptor	77	9e-13	
gi 4557267 ref NP_000016.1	adrenergic, beta-3-, receptor [...]	77	9e-13	
gi 27685697 ref XP_220099.1	similar to putative neurotrans...	77	9e-13	
gi 55646095 ref XP_523721.1	PREDICTED: similar to galanin ...	77	9e-13	
gi 54696712 gb AAV38728.1	somatostatin receptor 2 [synthet...	77	9e-13	
gi 4557637 ref NP_001516.1	orexin receptor 1 [Homo sapiens]...	77	9e-13	
gi 1070629 pir QRHUB3	beta-3-adrenergic receptor, splice f...	77	9e-13	
gi 1518036 gb AAC60068.1	dopamine D1C receptor	77	9e-13	
gi 47218969 emb CAG02007.1	unnamed protein product [Tetrao...	77	9e-13	
gi 2144868 pir DYRTD1	dopamine receptor D1 - rat	76	1e-12	
gi 34879477 ref XP_341112.1	5-hydroxytryptamine receptor [...]	76	1e-12	
gi 50754733 ref XP_414481.1	PREDICTED: similar to serotoni...	76	1e-12	
gi 47216965 emb CAG04907.1	unnamed protein product [Tetrao...	76	1e-12	
gi 908913 gb AAA70428.1	D1 dopamine receptor protein >gi 1...	76	1e-12	
gi 20857619 ref XP_136992.1	PREDICTED: similar to Putative...	76	2e-12	
gi 6981044 ref NP_037097.1	histamine receptor H 2 [Rattus ...]	76	2e-12	
gi 13236497 ref NP_076917.1	5-hydroxytryptamine (serotonin...	76	2e-12	
gi 47575845 ref NP_001001267.1	serotonin 4A receptor (5-HT...	76	2e-12	
gi 27806153 ref NP_776892.1	somatostatin receptor 2 [Bos t...	76	2e-12	
gi 50755087 ref XP_425206.1	PREDICTED: similar to dopamine...	76	2e-12	
gi 6425114 gb AAF08306.1	beta 3 adrenergic receptor [Macac...	76	2e-12	
gi 45439382 gb AAS18239.2	5-hydroxytryptamine receptor 4 [...]	76	2e-12	
gi 1362718 pir A55886	dopamine receptor D1A - chicken	76	2e-12	
gi 924639 gb AAC52232.1	5-HT4S receptor >gi 1363262 pir S...	75	2e-12	
gi 6981060 ref NP_036985.1	5-hydroxytryptamine (serotonin)...	75	2e-12	
gi 15558894 emb CAC69545.1	somatostatin receptor subtype 1...	75	2e-12	
gi 4009515 gb AAC95468.1	galanin receptor 2 [Mus musculus]	75	3e-12	
gi 2136496 pir I47217	dopamine receptor - pig >gi 808098 g...	75	3e-12	
gi 12643864 sp Q9TT96 B1AR BOVIN	Beta-1 adrenergic receptor...	75	3e-12	
gi 4102061 gb AAD01420.1	somatostatin receptor type 2 [Mus...	75	3e-12	
gi 33859542 ref NP_034206.1	dopamine receptor D1A [Mus mus...	75	3e-12	
gi 48139558 ref XP_397024.1	similar to allatostatin recept...	75	3e-12	
gi 4102060 gb AAD01419.1	somatostatin receptor type 2 [Mus...	75	3e-12	
gi 47219685 emb CAG12607.1	unnamed protein product [Tetrao...	75	3e-12	
gi 6678039 ref NP_033243.1	somatostatin receptor 2 [Mus mu...	74	5e-12	
gi 55625662 ref XP_527182.1	PREDICTED: dopamine receptor D...	74	5e-12	
gi 55742138 ref NP_001007122.1	5-hydroxytryptamine (seroto...	74	5e-12	
gi 6680660 ref NP_031442.1	adrenergic receptor, alpha 1b [...]	74	5e-12	
gi 1518040 gb AAC60070.1	dopamine D1B receptor	74	5e-12	
gi 47213581 emb CAF93484.1	unnamed protein product [Tetrao...	74	5e-12	
gi 3335678 gb AAC27328.1	D1 dopamine receptor [Macaca mula...	74	5e-12	
gi 30399 emb CAA41734.1	D-1 dopamine receptor [Homo sapiens]	74	5e-12	
gi 1362720 pir C55886	dopamine receptor D1D - chicken	74	5e-12	
gi 49456799 emb CAG46720.1	DRD1 [Homo sapiens]	74	5e-12	
gi 346640 pir S28058	serotonin receptor 5 - mouse	74	6e-12	
gi 3283973 gb AAC25414.1	beta 1 adrenergic receptor [Ovis ...]	74	6e-12	
gi 50979252 ref NP_001003377.1	beta 3 adrenergic receptor ...	74	6e-12	
gi 50755831 ref XP_425241.1	PREDICTED: similar to somatost...	74	6e-12	
gi 28827164 gb AAO24755.1	melanin-concentrating hormone re...	74	6e-12	
gi 54638423 gb EAL27825.1	GA21941-PA [Drosophila pseudoobs...	74	6e-12	
gi 7159252 gb AAF37686.1	octopamine receptor [Aplysia cali...	74	6e-12	

gi 47223437 emb CAG04298.1	unnamed protein product [Tetrao...	74	6e-12	
gi 2137787 pir JC4629	somatostatin receptor type-4 - mouse...	74	6e-12	G
gi 1913918 gb AAB51068.1	beta-3 adrenergic receptor [Canis...	74	6e-12	
gi 603869 emb CAA57494.1	D1-like dopamine receptor [Oreoch...	74	8e-12	
gi 6978775 ref NP_036678.1	dopamine receptor 1A [Rattus no...	74	8e-12	G
gi 55241891 gb EAA08140.3	ENSANGP00000018804 [Anopheles ga...	74	8e-12	
gi 50950129 ref NP_001002933.1	hypocretin receptor 2 [Cani...	73	1e-11	G
gi 47223876 emb CAG06053.1	unnamed protein product [Tetrao...	73	1e-11	
gi 47217696 emb CAG13327.1	unnamed protein product [Tetrao...	73	1e-11	
gi 47214321 emb CAG11192.1	unnamed protein product [Tetrao...	73	1e-11	
gi 37704009 gb AAR01326.1	orexin receptor type-1 [Mus musc...	73	1e-11	G
gi 31746493 gb AAP68899.1	somatostatin receptor type five ...	73	1e-11	
gi 23379643 gb AAM76564.1	adrenergic receptor beta-3 [Pong...	73	1e-11	
gi 46451437 gb AAS97963.1	type 3 somatostatin receptor [As...	73	1e-11	
gi 55665868 emb CAH73407.1	solute carrier family 31 (coppe...	72	2e-11	
gi 28839657 gb AAH47526.1	HTR7 protein [Homo sapiens] >gi ...	72	2e-11	G
gi 10880131 ref NP_062874.1	5-hydroxytryptamine receptor 7...	72	2e-11	G
gi 10880129 ref NP_062873.1	5-hydroxytryptamine receptor 7...	72	2e-11	G
gi 55634399 ref XP_521556.1	PREDICTED: similar to 5-hydrox...	72	2e-11	
gi 6981018 ref NP_037196.1	hypocretin receptor 1 [Rattus n...	72	2e-11	G
gi 55664480 emb CAH69965.1	5-hydroxytryptamine (serotonin)...	72	2e-11	
gi 18597350 gb AAL76096.1	somatostatin receptor [Rattus no...	72	2e-11	G
gi 227114 prf 1614340A	dopamine receptor D1	72	2e-11	
gi 2119497 pir I51661	dopamine D1C receptor - African claw...	72	2e-11	
gi 4557639 ref NP_001517.1	orexin receptor 2 [Homo sapiens...	72	2e-11	G
gi 6840859 gb AAF28802.1	octopamine receptor [Aplysia kuro...	72	2e-11	
gi 435817 gb AAB28595.1	5-hydroxytryptamine receptor subty...	72	2e-11	
gi 6680329 ref NP_032341.1	5-hydroxytryptamine (serotonin)...	72	3e-11	G
gi 6981062 ref NP_037280.1	5-hydroxytryptamine (serotonin)...	72	3e-11	G
gi 55666937 ref XP_528711.1	PREDICTED: similar to D(1B) do...	72	3e-11	
gi 33329181 gb AAQ09991.1	mu opioid-like receptor [Rana pi...	72	3e-11	
gi 3941553 gb AAC82384.1	putative odorant receptor LOR12 [...]	72	3e-11	
gi 8885888 gb AAF80280.1	alpha 1b adrenoceptor [Oryctolagu...	72	3e-11	
gi 402163 gb AAA42134.1	5HT-7 serotonin receptor	71	4e-11	G
gi 477007 pir A47519	serotonin receptor 7 - rat >gi 410307...	71	4e-11	G
gi 34866769 ref XP_346803.1	hypothetical protein XP_346802...	71	4e-11	G
gi 45387607 ref NP_991152.1	opiate receptor-like [Danio re...	71	4e-11	G
gi 47522982 ref NP_999250.1	serotonin 5-hydroxytryptamine ...	71	4e-11	G
gi 50749576 ref XP_426518.1	PREDICTED: similar to dopamine...	71	4e-11	G
gi 449413 prf 1919247A	betal adrenergic receptor	71	4e-11	
gi 50110 emb CAA42966.1	beta-3-adrenergic-receptor [Mus mu...	71	5e-11	G
gi 7441613 pir S71323	alpha-1A adrenergic receptor - Japan...	71	5e-11	
gi 6678041 ref NP_033244.1	somatostatin receptor 3 [Mus mu...	71	5e-11	G
gi 298113 emb CAA51384.1	beta-3-adrenergic receptor [Mus m...	71	5e-11	G
gi 55630516 ref XP_519708.1	PREDICTED: similar to beta-3-a...	71	5e-11	
gi 32423757 gb AAF97249.2	mu opioid receptor [Macaca mulatta]	71	5e-11	
gi 7304871 ref NP_038490.1	adrenergic receptor, beta 3 [Mu...	71	5e-11	G
gi 52219136 ref NP_001004654.1	zgc:103757 [Danio rerio] >g...	71	5e-11	G
gi 50747427 ref XP_420871.1	PREDICTED: similar to alpha 1d...	71	5e-11	G
gi 1698952 gb AAB37322.1	high-affinity lysophosphatidic ac...	71	5e-11	G
gi 47213181 emb CAF95370.1	unnamed protein product [Tetrao...	71	5e-11	
gi 47207357 emb CAF93600.1	unnamed protein product [Tetrao...	71	5e-11	
gi 1345417 dbj BAA09921.1	alphaA-adrenoceptor [Oryzias la...	71	5e-11	
gi 31746495 gb AAP68900.1	type-three somatostatin receptor...	70	7e-11	
gi 12621102 ref NP_075227.1	5-hydroxytryptamine (serotonin...	70	7e-11	G
gi 23379641 gb AAM76563.1	adrenergic receptor beta-3 [Gori...	70	7e-11	
gi 51869673 emb CAF31499.1	5-HT receptor 7a [Canis familia...	70	7e-11	G
gi 1857149 gb AAB48396.1	5-hydroxytryptamine7 receptor iso...	70	7e-11	G
gi 2133653 pir S68780	dopamine D1-like receptor - fruit fl...	70	9e-11	
gi 627342 pir A55044	beta-4C-adrenergic receptor - turkey ...	70	9e-11	
gi 6978459 ref NP_036833.1	adrenergic receptor, beta 1 [Ra...	70	9e-11	G
gi 34328059 ref NP_038488.1	adrenergic receptor, alpha 1d ...	70	9e-11	G

gi 23171234 gb AAF55030.2	CG9652-PA [Drosophila melanogast...	70	9e-11	
gi 6981020 ref NP_037206.1	hypocretin receptor 2 [Rattus n...	70	9e-11	
gi 6680327 ref NP_032340.1	5-hydroxytryptamine (serotonin)...	70	9e-11	
gi 45382489 ref NP_990692.1	Mel-1c melatonin receptor [Gal...	70	9e-11	
gi 6978463 ref NP_037240.1	adrenergic receptor, beta 3 [Ra...	70	1e-10	
gi 220671 dbj BAA00527.1	beta-1 adrenergic receptor [Rattu...	70	1e-10	
gi 2134105 pir IS1666	Mel-1c receptor subtype - African cl...	70	1e-10	
gi 241216 gb AAB20702.1	beta 3-adrenergic receptor [Rattus...	70	1e-10	
gi 6680666 ref NP_031445.1	adrenergic receptor, beta 1 [Mu...	70	1e-10	
gi 1857131 gb AAB48390.1	Mel-1c(a) melatonin receptor [Xen...	70	1e-10	
gi 32482003 gb AAP84354.1	somatostatin receptor 3 [Homo sa...	69	1e-10	
gi 55586759 ref XP_524646.1	PREDICTED: similar to hypocret...	69	1e-10	
gi 21951818 gb AAM82355.1	somatostatin receptor type 3 [Ca...	69	1e-10	
gi 23379645 gb AAM76565.1	adrenergic receptor beta-3 [Sagu...	69	1e-10	
gi 23379639 gb AAM76562.1	adrenergic receptor beta-3 [Pan ...	69	1e-10	
gi 50747348 ref XP_426351.1	PREDICTED: similar to dopamine...	69	1e-10	
gi 46575616 gb AAH69171.1	Putative neurotransmitter recept...	69	1e-10	
gi 27695547 gb AAH42068.1	Similar to somatostatin receptor...	69	1e-10	
gi 27676606 ref XP_218415.1	similar to G protein-coupled r...	69	2e-10	
gi 51869675 emb CAF31500.1	5-HT receptor 7b [Canis familia...	69	2e-10	
gi 202764 gb AAA63478.1	alpha-1B adrenergic receptor	69	2e-10	
gi 54637595 gb EAL26997.1	GA19956-PA [Drosophila pseudoobs...	69	2e-10	
gi 6120127 gb AAF04303.1	beta-1 adrenergic receptor [Felis...	69	2e-10	
gi 14718772 gb AAK71884.1	mu-opioid receptor [Macaca fasci...	69	2e-10	
gi 47211074 emb CAF89689.1	unnamed protein product [Tetrao...	69	2e-10	
gi 1888505 gb AAB53098.1	alpha 1d adrenoceptor [Oryctolagu...	69	2e-10	
gi 479128 emb CAA54451.1	dopamine receptor [Drosophila mel...	69	2e-10	
gi 1103944 gb AAH83015.1	5-hydroxytryptamine7 receptor >gi...	69	2e-10	
gi 55665067 emb CAH72100.1	RP11-295F4.5 [Homo sapiens]	69	3e-10	
gi 28316758 ref NP_783599.1	G protein-coupled receptor 4 [...	69	3e-10	
gi 345733 pir A45121	alpha-1B adrenergic receptor - human	69	3e-10	
gi 109444 pir A40491	alpha-1-adrenergic receptor - golden ...	69	3e-10	
gi 26335986 dbj BAC31691.1	unnamed protein product [Mus mu...	69	3e-10	
gi 4501959 ref NP_000670.1	alpha-1B-adrenergic receptor [H...	69	3e-10	
gi 47575853 ref NP_058687.2	adrenergic receptor, alpha 1b ...	69	3e-10	
gi 13324696 ref NP_077809.1	adrenergic receptor, alpha 1d ...	69	3e-10	
gi 27371132 gb AAH37002.1	Adra1b protein [Mus musculus]	69	3e-10	
gi 34368416 emb CAE46112.1	alpha-1B adrenergic receptor [S...	69	3e-10	
gi 47213375 emb CAF90994.1	unnamed protein product [Tetrao...	69	3e-10	
gi 666891 gb AAB59485.1	alpha-1B adrenergic receptor >gi 1...	69	3e-10	
gi 547221 gb AAB31164.1	alpha adrenergic receptor subtype ...	69	3e-10	
gi 543734 sp P15823 A1AB RAT	Alpha-1B adrenergic receptor (...	69	3e-10	
gi 37723880 gb AAO03563.1	somatostatin receptor subtype 3 ...	68	3e-10	
gi 38112417 gb AAR11294.1	orexin receptor type-2a [Mus mus...	68	3e-10	
gi 38112416 gb AAR11293.1	orexin receptor type-2b [Mus mus...	68	3e-10	
gi 27806037 ref NP_776833.1	opioid receptor, mu 1 [Bos tau...	68	3e-10	
gi 1857135 gb AAB48392.1	Mel-1c(b) melatonin receptor [Xen...	68	3e-10	
gi 3954976 emb CAA06542.1	dopamine D1x receptor [Myxine gl...	68	3e-10	
gi 20139232 sp Q9MYW9 OPRM	MACMU Mu-type opioid receptor (M...	68	3e-10	
gi 7690135 gb AAB31163.2	alpha adrenergic receptor subtype...	68	4e-10	
gi 86790 pir JH0447	alpha-1A-adrenergic receptor - human >...	68	4e-10	
gi 86529 pir A25896	beta-adrenergic receptor - turkey >gi ...	68	4e-10	
gi 4501957 ref NP_000669.1	alpha-1D-adrenergic receptor [H...	68	4e-10	
gi 13027456 ref NP_076482.1	orphan G protein-coupled recep...	68	4e-10	
gi 27446646 gb AAK74189.1	mu opioid receptor variant MOR-1...	68	4e-10	
gi 4588548 gb AAD26148.1	beta 3 adrenergic receptor; beta3...	68	4e-10	
gi 2661769 emb CAA73841.1	dopamine receptor, D1 [Apis mell...	68	4e-10	
gi 11128469 emb CAC15482.1	dJ366F13.1 (opioid receptor mu ...	67	6e-10	
gi 38156309 gb AAR12887.1	mu opioid receptor variant MOR-1...	67	6e-10	

gi 4501961 ref NP_000671.1	alpha-1A-adrenergic receptor is...	67	6e-10	
gi 50959650 gb AAH74927.1	Opioid receptor, mu 1 [Homo sapi...	67	6e-10	
gi 37362413 gb AAQ91331.1	adrenergic alpha 1A receptor [Ho...	67	6e-10	
gi 37729014 gb AAO03562.1	somatostatin receptor subtype 4 ...	67	6e-10	
gi 7300871 gb AAF56012.1	CG6919-PA [Drosophila melanogaste...	67	6e-10	
gi 15451761 ref NP_150647.1	alpha-1A-adrenergic receptor i...	67	6e-10	
gi 15451759 ref NP_150646.1	alpha-1A-adrenergic receptor i...	67	6e-10	
gi 15451757 ref NP_150645.1	alpha-1A-adrenergic receptor i...	67	6e-10	
gi 34850746 ref NP_919242.1	adrenergic, beta-1-, receptor ...	67	6e-10	
gi 48374069 ref NP_001001538.1	mu opioid receptor [Sus scr...	67	6e-10	
gi 50801488 ref XP_428541.1	PREDICTED: similar to beta-4C-...	67	6e-10	
gi 50759565 ref XP_425762.1	PREDICTED: similar to alpha-1A...	67	6e-10	
gi 50737619 ref XP_426087.1	PREDICTED: similar to opioid r...	67	6e-10	
gi 27446648 gb AAK74190.1	mu opioid receptor variant MOR-1...	67	6e-10	
gi 27373028 gb AAN87342.1	DRG kappa 1 splice variant KOR 1...	67	6e-10	
gi 47217452 emb CAG10221.1	unnamed protein product [Tetrao...	67	6e-10	
gi 607912 gb AAB60354.1	mu opioid receptor variant >gi 213...	67	6e-10	
gi 666893 gb AAB59486.1	alpha-1C-adrenergic receptor	67	6e-10	
gi 6114881 emb CAB59347.1	alpha-1D adrenergic receptor [Su...	67	6e-10	
gi 547222 gb AAB31165.1	alpha adrenergic receptor subtype ...	67	6e-10	
gi 1362719 pir B55886	dopamine receptor D1B - chicken	67	6e-10	
gi 40362763 gb AAR84650.1	alpha 1A adrenoceptor isoform 6 ...	67	6e-10	
gi 40362761 gb AAR84649.1	alpha 1A adrenoceptor isoform 5b...	67	6e-10	
gi 40362757 gb AAR84647.1	alpha 1A adrenoceptor isoform 3c...	67	6e-10	
gi 40362755 gb AAR84646.1	alpha 1A adrenoceptor isoform 3b...	67	6e-10	
gi 40362753 gb AAR84645.1	alpha 1A adrenoceptor isoform 2c...	67	6e-10	
gi 12858052 dbj BAB31185.1	unnamed protein product [Mus mu...	67	6e-10	
gi 55558 emb CAA35934.1	unnamed protein product [Rattus no...	67	7e-10	
gi 111409 pir S12591	beta-1-adrenergic receptor - rat	67	7e-10	
gi 111359 pir A38731	alpha-1A adrenergic receptor - rat >g...	67	7e-10	
gi 28460708 ref NP_783178.1	trace amine receptor 9 [Rattus...	67	7e-10	
gi 2143857 pir I56517	mu opioid receptor - rat >gi 403574 ...	67	7e-10	
gi 4505515 ref NP_000905.1	opioid receptor, mu 1 [Homo sap...	67	7e-10	
gi 32186858 gb AAP72174.1	somatostatin receptor 1 [Canis f...	67	7e-10	
gi 38016137 ref NP_937822.1	G protein-coupled receptor 103...	67	7e-10	
gi 12231866 gb AAG49292.1	5-hydroxytryptamine 7 receptor [...]	67	7e-10	
gi 47117904 sp Q96P65 QRFR HUMAN	Orexigenic neuropeptide QR...	67	7e-10	
gi 27261706 gb AAN86027.1	mu-opioid receptor [Cavia porcel...	67	7e-10	
gi 404116 dbj BAA04109.1	kappa opioid receptor [Rattus nor...	67	1e-09	
gi 1083836 pir A55259	kappa opioid receptor - guinea pig >...	67	1e-09	
gi 425189 gb AAA41496.1	kappa opioid receptor	67	1e-09	
gi 1204095 emb CAA56457.1	dopamine receptor [Takifugu rubr...	67	1e-09	
gi 34866003 ref XP_346733.1	hypothetical protein XP_346732...	67	1e-09	
gi 6981310 ref NP_037203.1	opioid receptor, mu 1 [Rattus n...	67	1e-09	
gi 35187403 gb AAQ84306.1	type 7 serotonin receptor [Helis...	67	1e-09	
gi 12232632 gb AAD22540.2	alpha-1A adrenergic receptor [Ca...	67	1e-09	
gi 37625043 gb AAQ95734.1	dopamine receptor D4 [Mustela pu...	67	1e-09	
gi 47217312 emb CAG12520.1	unnamed protein product [Tetrao...	67	1e-09	
gi 1657822 gb AAB93648.1	betal adrenergic receptor [Canis ...]	67	1e-09	
gi 2143855 pir I56504	mu opioid receptor - rat >gi 1017732...	67	1e-09	
gi 241214 gb AAB20701.1	alpha 1-adrenergic receptor subtyp...	66	1e-09	
gi 885865 gb AAA86878.1	mu opioid recptor	66	1e-09	
gi 28212244 ref NP_783177.1	trace amine receptor 6 [Rattus...	66	1e-09	
gi 39725940 ref NP_000903.2	opioid receptor, kappa 1 [Homo...	66	1e-09	
gi 37724703 gb AAO18365.1	mu opioid receptor variant CII [...]	66	1e-09	
gi 6754940 ref NP_035143.1	opioid receptor, mu 1 [Mus musc...	66	1e-09	
gi 4505925 ref NP_003958.1	putative neurotransmitter recep...	66	1e-09	
gi 565069 gb AAB60673.1	mu opioid receptor [Mus musculus] ...	66	1e-09	

gi 8778198 gb AAF79213.1	mu opioid receptor variant F [Mus...	66	1e-09	
gi 18026695 gb AAL55583.1	mu opioid receptor variant BII [...]	66	1e-09	
gi 18026693 gb AAL55582.1	mu opioid receptor variant BI [M...	66	1e-09	
gi 18026691 gb AAL55581.1	mu opioid receptor variant A [Mu...	66	1e-09	
gi 5853309 gb AAD54415.1	mu opioid receptor variant C; MOR...	66	1e-09	
gi 45768619 gb AAH67468.1	G protein-coupled receptor 63 [H...	66	1e-09	
gi 20379020 gb AAM21070.1	opioid receptor kappa [Homo sapi...	66	1e-09	
gi 27448127 gb AAO13794.1	mu opioid receptor variant R [Mu...	66	1e-09	
gi 27448125 gb AAO13793.1	mu opioid receptor variant Q [Mu...	66	1e-09	
gi 27448123 gb AAO13792.1	mu opioid receptor variant P [Mu...	66	1e-09	
gi 27446644 gb AAK74188.1	mu opioid receptor variant MOR-1...	66	1e-09	
gi 1256416 gb AAA96315.1	beta3-adrenergic receptor [Cavia ...]	66	1e-09	
gi 5805153 gb AAD51861.1	mu opioid receptor MOR1D [Mus mus...	66	1e-09	
gi 3650454 gb AAC61296.1	octopamine receptor type 1 [Lymna...	66	1e-09	
gi 409029 gb AAA93114.1	alpha1C adrenergic receptor	66	1e-09	
gi 26332529 dbj BAC29982.1	unnamed protein product [Mus mu...	66	1e-09	
gi 22832515 gb AAF48875.2	CG6857-PA [Drosophila melanogast...	66	2e-09	
gi 15004694 gb AAK77197.1	adrenergic receptor alpha-1a [Ho...	66	2e-09	
gi 47225323 emb CAG09823.1	unnamed protein product [Tetrao...	66	2e-09	
gi 47213874 emb CAF94024.1	unnamed protein product [Tetrao...	66	2e-09	
gi 47205254 emb CAF95660.1	unnamed protein product [Tetrao...	66	2e-09	
gi 47178862 emb CAG13901.1	unnamed protein product [Tetrao...	66	2e-09	
gi 32165520 gb AAP72127.1	G protein-coupled receptor 135 [...]	65	2e-09	
gi 395368 emb CAA49352.1	serotonin receptor [Rattus norveg...	65	2e-09	
gi 1002739 gb AAC50504.1	GPR10	65	2e-09	
gi 55250889 gb AAH85587.1	Zgc:103685 [Danio rerio] >gi 559...	65	2e-09	
gi 54111955 gb AAV28689.1	mu opioid receptor [Taricha gran...	65	2e-09	
gi 52698314 gb AAR36861.1	melanopsin [Felis catus]	65	2e-09	
gi 48101556 ref XP_392683.1	similar to CG4322-PA [Apis mel...	65	2e-09	
gi 2796173 gb AAB97525.1	beta-1 adrenergic receptor [Sus s...	65	2e-09	
gi 2398857 dbj BAA22217.1	Gq-coupled rhodopsin [Mizuhopect...	65	2e-09	
gi 24111248 ref NP_035141.1	opioid receptor, kappa 1 [Mus ...]	65	3e-09	
gi 30231226 ref NP_840074.1	opsin 4 (melanopsin) [Danio re...	65	3e-09	
gi 51951314 gb AAU15126.1	kappa opioid receptor [Taricha g...	65	3e-09	
gi 54642851 gb EAL31595.1	GA16412-PA [Drosophila pseudoobs...	65	3e-09	
gi 47222483 emb CAG13003.1	unnamed protein product [Tetrao...	65	3e-09	
gi 944892 gb AAB60369.1	dopamine D2 receptor >gi 1706283 s...	65	3e-09	
gi 478273 pir JC1525	alpha-1B-adrenergic receptor - rat >g...	65	4e-09	
gi 18859151 ref NP_571782.1	opioid receptor, mu 1 [Danio r...	65	4e-09	
gi 27806213 ref NP_776923.1	adrenergic, alpha 1A, receptor...	65	4e-09	
gi 50729258 ref XP_425480.1	PREDICTED: similar to Somatost...	65	4e-09	
gi 47227683 emb CAG09680.1	unnamed protein product [Tetrao...	65	4e-09	
gi 6563386 emb CAB62570.1	alpha-1A adrenergic receptor [Su...	65	4e-09	
gi 1438750 gb AAB36304.1	beta 1-adrenergic receptor [Ovis ...]	65	4e-09	
gi 21928413 dbj BAC05800.1	seven transmembrane helix recep...	65	4e-09	
gi 50749927 ref XP_426540.1	PREDICTED: similar to beta-adr...	64	5e-09	
gi 45708982 gb AAH67455.1	G protein-coupled receptor 45 [H...	64	5e-09	
gi 55627426 ref XP_527507.1	PREDICTED: similar to Putative...	64	6e-09	
gi 20070983 gb AAH26357.1	G protein-coupled receptor 62 [H...	64	6e-09	
gi 3242941 gb AAC23861.1	alpha-1A adrenoreceptor [Canis fa...	64	6e-09	
gi 2198745 gb AAB61334.1	alpha 1a-adrenoceptor [Oryctolagu...	64	6e-09	
gi 8843927 gb AAF80169.1	alpha 1a-adrenoceptor isoform 3 [...]	64	6e-09	
gi 8843925 gb AAF80168.1	alpha 1a-adrenoceptor isoform 2 [...]	64	6e-09	
gi 51765584 ref XP_487102.1	PREDICTED: similar to trace am...	64	8e-09	
gi 31083315 ref NP_009158.3	G protein-coupled receptor 45 ...	64	8e-09	
gi 37524029 gb AAQ92315.1	relaxin-3 receptor-1 [Homo sapie...	64	8e-09	
gi 31542909 ref NP_444337.2	G protein-coupled receptor 45 ...	64	8e-09	
gi 55624572 ref XP_526961.1	PREDICTED: G-protein coupled r...	64	8e-09	
gi 55599359 ref XP_515672.1	PREDICTED: similar to G protei...	64	8e-09	
gi 33859500 ref NP_033760.1	adenosine A2a receptor [Mus mu...	64	8e-09	

gi 34878896 ref NP_543141.2	G protein-coupled receptor 62 ...	64	8e-09	
gi 23452342 gb AAN33001.1	adenosine-like receptor [Asterin...	64	8e-09	
gi 11993046 gb AAG42572.1	G protein-coupled receptor PSP24...	64	8e-09	
gi 47226910 emb CAG05802.1	unnamed protein product [Tetrao...	64	8e-09	
gi 2119488 pir I50081	rhodopsin - green anole >gi 468262 g...	63	1e-08	
gi 13540557 ref NP_110411.1	G protein-coupled receptor 63 ...	63	1e-08	
gi 27683113 ref XP_237112.1	similar to G protein-coupled r...	63	1e-08	
gi 6753710 ref NP_034228.1	opsin (encephalopsin) [Mus musc...	63	1e-08	
gi 37497118 ref NP_922917.1	dopamine receptor D2 like [Dan...	63	1e-08	
gi 41386782 ref NP_776656.1	adrenergic, beta-2, receptor, ...	63	1e-08	
gi 50742751 ref XP_419740.1	PREDICTED: similar to Vascular...	63	1e-08	
gi 45768489 gb AAH67466.1	G protein-coupled receptor 63 [H...	63	1e-08	
gi 7271779 gb AAF44619.1	rod-like opsin [Salmo salar]	63	1e-08	
gi 6017883 gb AAF01674.1	beta 1 adrenergic receptor [Bos t...	63	1e-08	
gi 24432089 ref NP_006047.2	neuromedin U receptor 1 [Homo ...	63	1e-08	
gi 4028154 gb AAC96118.1	putative neurotransmitter recepto...	63	1e-08	
gi 51765586 ref XP_487103.1	PREDICTED: similar to trace am...	62	2e-08	
gi 2865470 gb AAC02680.1	orphan G protein-coupled receptor...	62	2e-08	
gi 30354034 gb AAH51914.1	NMUR1 protein [Homo sapiens] >gi...	62	2e-08	
gi 33504559 ref NP_878306.1	opioid receptor, kappa 1 [Dani...	62	2e-08	
gi 45767693 gb AAH67467.1	G protein-coupled receptor 63 [H...	62	2e-08	
gi 22091559 emb CAD23111.1	blue cone opsin [Cottus gobio]	62	2e-08	
gi 4455063 gb AAD21056.1	orphan G protein-coupled receptor...	62	2e-08	
gi 2735351 gb AAB93884.1	high-affinity lysophosphatidic ac...	62	2e-08	
gi 71928 pir O00CG	rhodopsin - giant octopus	62	2e-08	
gi 2695874 emb CAB08107.1	P2Y-like G-protein coupled recep...	62	2e-08	
gi 808876 dbj BAA06508.1	kappa-opioid receptor [Mus muscul...	62	2e-08	
gi 345542 pir B45229	opsin, green-sensitive (clone GFgr-2)...	62	2e-08	
gi 4885301 ref NP_005282.1	G protein-coupled receptor 17 [...	62	2e-08	
gi 55742652 ref NP_999323.1	5-HT1D receptor [Sus scrofa] >...	62	2e-08	
gi 38016150 ref NP_937842.1	G protein-coupled receptor 103...	62	2e-08	
gi 38016146 ref NP_937835.1	G protein-coupled receptor 103...	62	2e-08	
gi 18859537 ref NP_571661.1	vertebrate ancient long opsin ...	62	2e-08	
gi 21307817 gb AAL25619.1	orphan G protein-coupled recepto...	62	2e-08	
gi 51860765 gb AAU11506.1	melanopsin [Phodopus sungorus]	62	2e-08	
gi 14041800 dbj BAB55447.1	G protein-coupled receptor [Rat...	62	2e-08	
gi 47206009 emb CAF91280.1	unnamed protein product [Tetrao...	62	2e-08	
gi 47205825 emb CAF95884.1	unnamed protein product [Tetrao...	62	2e-08	
gi 9823 emb CAA30644.1	rhodopsin [Octopus dofleini] >gi 12...	62	2e-08	
gi 25025009 ref XP_204521.1	PREDICTED: similar to trace am...	62	3e-08	
gi 21594966 gb AAH31653.1	GPR17 protein [Homo sapiens]	62	3e-08	
gi 33622376 gb AAO38857.1	melanopsin [Rutilus rutilus]	62	3e-08	
gi 28212246 ref NP_783180.1	trace amine receptor 14 [Rattu...	62	3e-08	
gi 50749504 ref XP_421666.1	PREDICTED: similar to serotoni...	62	3e-08	
gi 1154643 emb CAA64210.1	serotonin receptor 1D [Cavia por...	62	3e-08	
gi 47215888 emb CAG12280.1	unnamed protein product [Tetrao...	62	3e-08	
gi 39591067 emb CAE58847.1	Hypothetical protein CBG02068 [...	62	3e-08	
gi 22477850 gb AAH36773.1	Opsin 3 (encephalopsin, panopsin...	61	4e-08	
gi 45445826 gb AAN11677.2	CG13702-PB [Drosophila melanogas...	61	4e-08	
gi 31203627 ref XP_310762.1	ENSANGP00000015565 [Anopheles ...	61	4e-08	
gi 55620557 ref XP_526207.1	PREDICTED: similar to G protei...	61	4e-08	
gi 7657071 ref NP_055137.1	opsin 3 (encephalopsin, panopsi...	61	4e-08	
gi 32483397 ref NP_000788.2	dopamine receptor D4 [Homo sap...	61	4e-08	
gi 17223726 gb AAL02125.1	allatostatin C/drostatin C recep...	61	4e-08	
gi 291946 gb AAB59386.1	dopamine receptor D4 [Homo sapiens...	61	4e-08	
gi 4325156 gb AAD17289.1	dopamine receptor D4-2 [synthetic...	61	4e-08	
gi 18077928 gb AAL58637.1	Dopamine D4 receptor [Homo sapiens]	61	4e-08	
gi 21928798 dbj BAC05985.1	seven transmembrane helix recep...	61	4e-08	
gi 54641635 gb EAL30385.1	GA20386-PA [Drosophila pseudoobs...	61	4e-08	
gi 47230682 emb CAF99875.1	unnamed protein product [Tetrao...	61	4e-08	

gi 47229610 emb CAG06806.1	unnamed protein product [Tetrao...	61	4e-08	
gi 47223619 emb CAF99228.1	unnamed protein product [Tetrao...	61	4e-08	
gi 47206414 emb CAF91545.1	unnamed protein product [Tetrao...	61	4e-08	
gi 7296517 gb AAF51802.1	CG7485-PA [Drosophila melanogaste...	61	5e-08	
gi 4758474 ref NP_004239.1	G protein-coupled receptor 10 [...]	61	5e-08	
gi 27714145 ref XP_232847.1	similar to G protein-coupled r...	61	5e-08	
gi 29570497 gb AAO91736.1	Dopamine receptor protein 1, iso...	61	5e-08	
gi 8272568 gb AAF74260.1	VA opsin [Cyprinus carpio]	61	5e-08	
gi 4028153 gb AAC96117.1	putative neurotransmitter recepto...	61	5e-08	
gi 47210163 emb CAF95187.1	unnamed protein product [Tetrao...	61	5e-08	
gi 47210162 emb CAF95186.1	unnamed protein product [Tetrao...	61	5e-08	
gi 47191525 emb CAF94841.1	unnamed protein product [Tetrao...	61	5e-08	
gi 85086 pir JH0170	octopamine receptor type I - fruit fly...	61	5e-08	
gi 103504 pir S12004	tyramine receptor - fruit fly (Drosop...	61	5e-08	
gi 27685687 ref XP_220097.1	similar to G protein-coupled r...	60	7e-08	
gi 55664453 emb CAH73066.1	G protein-coupled receptor 10 [...]	60	7e-08	
gi 38045882 gb AAR08905.1	nociceptin-like receptor [Rana p...	60	7e-08	
gi 22831755 gb AAF46059.2	CG3171-PA [Drosophila melanogast...	60	7e-08	
gi 55627624 ref XP_527542.1	PREDICTED: opioid receptor, mu...	60	7e-08	
gi 31542912 ref NP_109658.2	G protein-coupled receptor PSP...	60	7e-08	
gi 992582 dbj BAA07741.1	G protein-coupled seven-transmemb...	60	7e-08	
gi 47220968 emb CAF98197.1	unnamed protein product [Tetrao...	60	7e-08	
gi 11993048 gb AAG42573.1	G protein-coupled receptor PSP24...	60	7e-08	
gi 639573 gb AAB30835.1	alpha 1c-adrenoceptor, alpha 1c-AR...	60	7e-08	
gi 1122223 dbj BAA06806.1	alpha 1B adrenergic receptor [Ra...	60	7e-08	
gi 7707679 dbj BAA95353.1	trehalose receptor 1 [Drosophila...	60	7e-08	

Alignments

☐ >gi|37183331|gb|AAQ89465.1| GPR78 [Homo sapiens]
gi|36951034|ref|NP_543009.2| G protein-coupled receptor 78 [Homo sapiens]
gi|47480897|gb|AAH69813.1| G protein-coupled receptor 78 [Homo sapiens]
gi|47479613|gb|AAH69343.1| G protein-coupled receptor 78 [Homo sapiens]
gi|34784705|gb|AAH57778.1| G protein-coupled receptor 78 [Homo sapiens]
gi|46397876|sp|Q96P69|GP78 HUMAN Probable G protein-coupled receptor GPR78 (UNQ5925/PRO19818)
gi|21928620|dbj|BAC05898.1| seven transmembrane helix receptor [Homo sapiens]
Length = 363

Score = 720 bits (1858), Expect = 0.0
Identities = 363/363 (100%), Positives = 363/363 (100%)

Query: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60
MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM
Sbjct: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60

Query: 61 PFTLLGVMRGRTPSAPGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120
PFTLLGVMRGRTPSAPGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP
Sbjct: 61 PFTLLGVMRGRTPSAPGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120

Query: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180
RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG
Sbjct: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180

Query: 181 FVLPLAVLCLTSLQVHRVARRHCQRMDTVMKALALLADLHPSVRQRCLIQKRRRHRAT 240
FVLPLAVLCLTSLQVHRVARRHCQRMDTVMKALALLADLHPSVRQRCLIQKRRRHRAT
Sbjct: 181 FVLPLAVLCLTSLQVHRVARRHCQRMDTVMKALALLADLHPSVRQRCLIQKRRRHRAT 240

Query: 241 RKIGIAIATFLICFAPYVMTRLAELVPFVTVNAQWGILSKCLTYSKAVADPFTYSLRRP 300
RKIGIAIATFLICFAPYVMTRLAELVPFVTVNAQWGILSKCLTYSKAVADPFTYSLRRP
Sbjct: 241 RKIGIAIATFLICFAPYVMTRLAELVPFVTVNAQWGILSKCLTYSKAVADPFTYSLRRP 300

Query: 301 FRQVLAMVHRLKRTPRPASTHSSLDVAGMVHQLKRTPRPASTHNGSVDTENDSCLQ 360
FRQVLAMVHRLKRTPRPASTHSSLDVAGMVHQLKRTPRPASTHNGSVDTENDSCLQ

^Sbjct: 301 FRQVLAGMVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQ 360

Query: 361 QTH 363

QTH

Sbjct: 361 QTH 363

☐ >gi|16566319|gb|AAL26479.1| ☒ G protein-coupled receptor [Homo sapiens]
Length = 363

Score = 714 bits (1843), Expect = 0.0
Identities = 360/363 (99%), Positives = 361/363 (99%)

Query: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60
MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM
Sbjct: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60

Query: 61 PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120
PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP
Sbjct: 61 PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120

Query: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180
RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG
Sbjct: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180

Query: 181 FVLPLAVLCLTSLQVHRVARRHCQRMdVTMkALALLADLHPSVRQRCLIQKRRRHRAT 240
FVLPLAVLCLTSLQVHRVARRHCQRMdVTMkALA+LADLHPSVR CLIQKRRRHRAT
Sbjct: 181 FVLPLAVLCLTSLQVHRVARRHCQRMdVTMkALAVLADLHPSVRHGCLIQKRRRHRAT 240

Query: 241 RKIGIAIATFLICFAPYVMTRLaelVPFVTVNAQWGILSKCLTYSKAVADPFTYSLLRRP 300
RKIGIAIATFLICFAPYVMTRLaelVPFVTVNAQWGILSKCLTYSKAVADPFTYSLLRRP
Sbjct: 241 RKIGIAIATFLICFAPYVMTRLaelVPFVTVNAQWGILSKCLTYSKAVADPFTYSLLRRP 300

Query: 301 FRQVLAGMVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQ 360
FRQVLAGMVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQ
Sbjct: 301 FRQVLAGMVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQ 360

Query: 361 QTH 363
QTH
Sbjct: 361 QTH 363

☐ >gi|55622242|ref|XP_526521.1| PREDICTED: similar to G protein-coupled receptor 78 [Pan
troglodytes]
Length = 508

Score = 435 bits (1118), Expect = e-120
Identities = 224/245 (91%), Positives = 227/245 (92%)

Query: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60
MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM
Sbjct: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYSaelRTRASGVLLVNLslGHLLLAALDM 60

Query: 61 PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120
PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP
Sbjct: 61 PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRRLRP 120

Query: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180
RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG
Sbjct: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180

Query: 181 FVLPLAVLCLTSLQVHRVARRHCQRMdVTMkALALLADLHPSVRQRCLIQKRRRHRAT 240
F LPLAVLCLTSLQVHRVAR HCQRMdVTMkALALLADLHP Q + R A
Sbjct: 181 FALPLAVLCLTSLQVHRVARSHCQRMdVTMkALALLADLHPRYWPSACRQAQARDLGAP 240

Query: 241 RKIGI 245
+G+
Sbjct: 241 WAVGL 245

Score = 283 bits (725), Expect = 4e-75
Identities = 148/176 (84%), Positives = 151/176 (85%), Gaps = 7/176 (3%)

Query: 189 CLTSLQVHRVARRHCQRM DVTM KALALLADLHP-SVRQRCLIQKRRRHRATRKIGIAI 247
CL SLQ C A+ L L P SVRQRCLIQKRRRHRATRKIGIAI
Sbjct: 339 CLPSLQPLGSGPGFCPH-----PAIILTTLVLCPHSVRQRCLIQKRRRHRATRKIGIAI 392

Query: 248 ATFLICFAPYVMTRLAELVPFVTVNAQW GILSKCLTYSKAVADPFTYSLRRPFRQVLG 307
ATFLICFAPYVMTRLAELVPF+T+NAQW GILSKCLTYSKA ADPFTYSLRRPFRQVLG
Sbjct: 393 ATFLICFAPYVMTRLAELVPFITLNAQW GILSKCLTYSKAAADPFTYSLRRPFRQVLG 452

Query: 308 MVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQQTH 363
MVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQQTH
Sbjct: 453 MVHRLKRTPRPASTHDSSLDVAGMVHQLLKRTPRPASTHNGSVDTENDSCLQQTH 508

☐ >gi|50747354|ref|XP_426354.1| ☒ PREDICTED: similar to G protein-coupled receptor 26 [Gallus]
Length = 416

Score = 347 bits (890), Expect = 3e-94
Identities = 170/299 (56%), Positives = 222/299 (74%)

Query: 7 LLAGLLVMVLAVALLSNALVLLCCAYS AELRTRASGVLLVNLSLGHLLLAALDMPFTLLG 66
LLA LLV+VL V+LLSN LVLLC YS E+R + +GV LVNLS +LLL L+MPFTLLG
Sbjct: 7 LLALLLVLVVSVLLSNLLVLLCFVYSTEIRKQVAGVFLVNLSFCNLLLTILNMPFTLLG 66

Query: 67 VMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRLRPYAGLL 126
++R + P C+ +GFL+TFL SN LS+AALS D+W+AV FPL Y ++R + A +L
Sbjct: 67 ILRNQQPLGGCICKAVGFLETFTLSNTMLSMAALSIDKWIADVFLSYTSKMRYKDAVIL 126

Query: 127 LGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVGFVLPLA 186
+G +W SL F +L SW+ Y+S +ASC+L L E ER RF FT H+ F+L L
Sbjct: 127 MGYSWLHSLTFPLVSLFYSWVDYNSVYASCTLHLKEETERRRFTVFTIVFHSFMLS LV 186

Query: 187 VLCLTSLQVHRVARRHCQRM DVTM KALALLADLHPSVRQRCLIQKRRRHRATRKIGIA 246
+LC T L+V +VAR HC+R+D +TM+ L LL D+HPSV+QRCL +QKRRR RAT+KI I
Sbjct: 187 ILCFTYLKVLKVARFHCKRIDIIITMQLTVLLVDIHPSVKQRCLNEQKRRRQRATKKISIF 246

Query: 247 IATFLICFAPYVMTRLAELVPFVTVNAQW GILSKCLTYSKAVADPFTYSLRRPFRQVL 305
I +F+ICF PY++TRL EL+PFVT+N WGI+SKCLTYSKA +DPF YSLLR+ +++VL
Sbjct: 247 IGSFVICFGPYIITRLIELLPFVTINYYWGIISKCLTYSKAASDPFVYSLLRQQYKKVL 305

☐ >gi|23592220|ref|NP_703143.1| ☒ G protein-coupled receptor 26 [Homo sapiens]
gi|22293641|emb|CAD44281.1| ☒ putative orphan G protein-coupled receptor 26 [Homo sapiens]
gi|37537804|sp|Q8NDV2|GP26_HUMAN ☒ Probable G protein-coupled receptor 26
Length = 337

Score = 330 bits (845), Expect = 5e-89
Identities = 170/327 (51%), Positives = 222/327 (67%), Gaps = 4/327 (1%)

Query: 1 MGPGEALLAGLLVMVLAVALLSNALVLLCCAYS AELRTRASGVLLVNLSLGHLLLAALDM 60
M +A LAGLLV + V+LLSNALVLLC +SA++R +A + +NL+ G+LL ++M
Sbjct: 1 MNSWDAGLAGLLVGTMGVSLLSNALVLLCLLHSAIDRRQAPALFTLNLTGNNLLCTVVNM 60

Query: 61 PFTLLGVMRGRTSPAGACQVIGFLDTFLASNAALSVAALSADQWLAVGFPLRYAGRLRP 120
P TL GV+ R P+ C++ FLDTFLA+N+ LS+AALS D+W+AV FPL Y ++R
Sbjct: 61 PLTLAGVVAQRQAPAGDRLCRLAFLDTFLAANSMLSMAALSIDRWVAVVFPLSYRAKMRL 120

Query: 121 RYAGLLLGCAWGQSLAFSGAALGCSWLGYSSAFASCSLRLPPEPERPRFAAFTATLHAVG 180
R A L++ W +L F AAL SWLG+ +ASC+L ER RFA FT HA+
Sbjct: 121 RDAALMVAYTWLHALTFPAAALALS WLGFHQLYASCTLCSSRPDERLRFVFTGAFHALS 180